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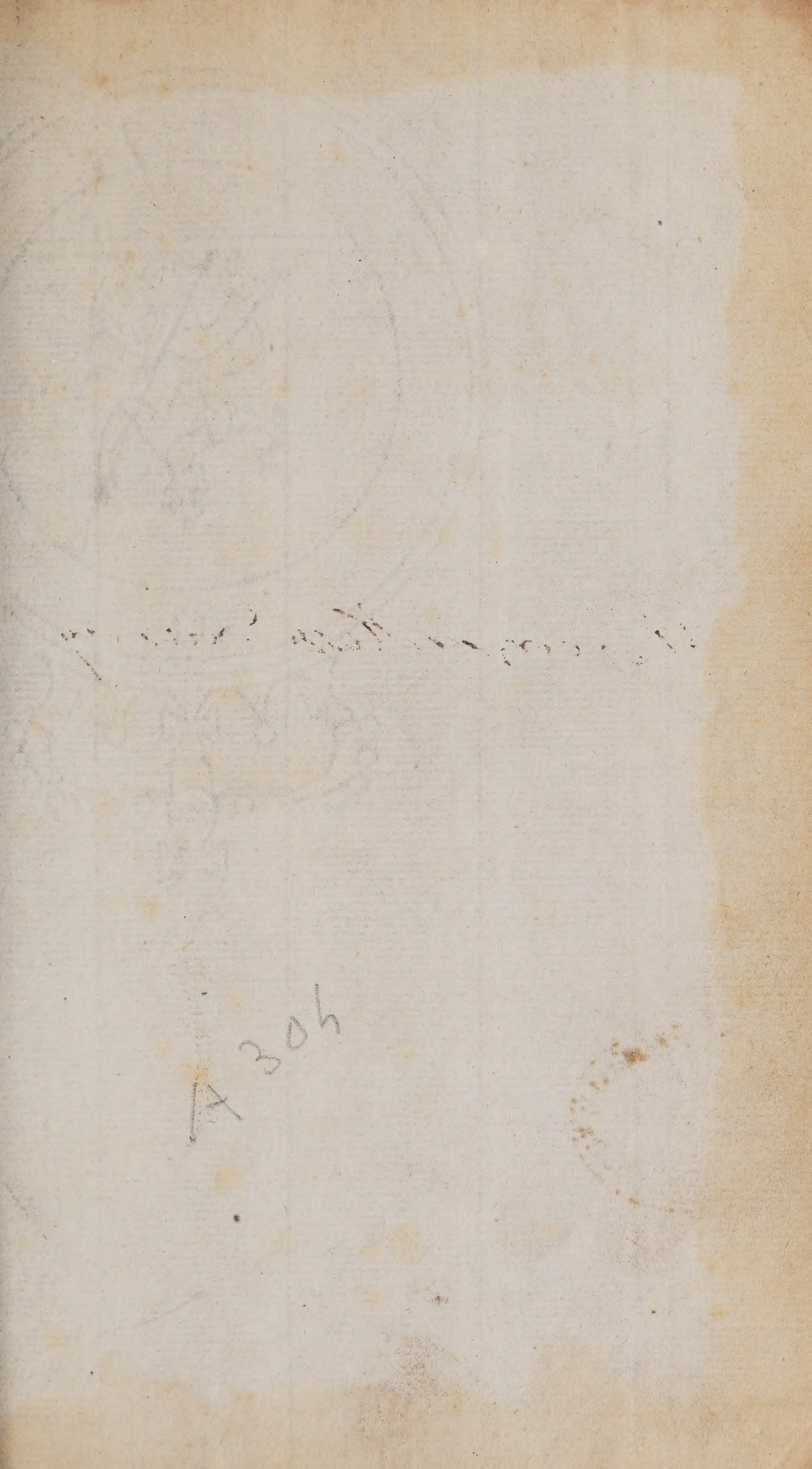
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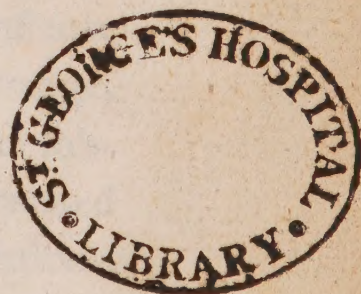


OBSERVATIONS
ON
POISONS;
AND ON THE
USE OF MERCURY
IN THE CURE OF
OBSTINATE DYSENTERIES;

By THOMAS HOULSTON, M.D.

PHYSICIAN TO THE LIVERPOOL INFIRMARY,
AND HONORARY MEMBER OF THE LITERARY AND PHI-
LOSOPHICAL SOCIETY OF MANCHESTER.

" Sparsa coegi. "



L O N D O N:

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P O I S O N S

AND ON THE

USE OF MERCURY

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"Spang's copy."

L O N D O N

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ADVERTISEMENT.

THE following papers, most of which have appeared in different publications, though at different times and on different occasions, have such a relation to each other, as to be thought proper to be collected and re-printed together. In compliance with the sentiments of those who have judged favourably of them, and hoping, with them, that some utility to society might possibly thence result, they are now offered in a more commodious, and less expensive, form to the Public.

And as a proper introduction, connecting in some sort the whole together, I have prefixed a paper, which I drew up lately at the instance of a friend, who requested I would arrange, and transmit to him, my thoughts on the subject of Poisons, of which I had already treated in some casual and detached publications. And, if part of what is contained in these shall appear to be repeated therein, as it is done with brevity, it may probably stand excused, and

ADVERTISEMENT.

and answer the purpose in some sort of a recapitulation ; — though, in the circumstances in which it was wrote, every one must perceive it was unavoidable.

At the end, though not immediately connected with the subject, I have added a paper, not before published, but which I sent sometime since to the Edinburgh Medical Society, on the good effects produced by Mercurials in some cases of obstinate Dysenteries: to which are now subjoined, some further observations on the use of the Dry Vomit, and on the success attending the method of treating Intermittents recommended by Dr. Lind.

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I.

An E S S A Y,
ON THE
LIVERPOOL SPA WATER;

WITH AN
APPENDIX

ON THE
ACCIDENTAL USE OF LEAD.

II.

A New METHOD
OF CURING
The SMALL - POX;
WITH A SPECIMEN OF
MISCELLANEOUS OBSERVATIONS

ON
MEDICAL SUBJECTS;

From the LATIN of JOHN FREDERICK CLOSS, A.M.
Philos. & Med. Doct.



O B S E R V A T I O N S

O N

P O I S O N S.

I.

*A Summary Account of the several Poisons, and
of the Means of counteracting their Effects.*

AS the subject is avowedly of the highest importance, and one on which every person, concerned in medical practice, cannot have too clear and prompt ideas, it may not be an unprofitable labour, if we take a general view of the nature and effects of that class of substances, which, given in small quantity, interrupt and destroy the vital functions : and, whilst we cannot but lament, that their action

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is so sudden, so violent, and so certain, as frequently to render every effort, to save life, fruitless, it may be useful to point out those means, which reason and experience shew to be the most likely, and most efficacious, to counteract the baneful effects of the several kinds of poisons.

It is believed that, in former times, the knowledge of different kinds of poisons, as well as of counter-poisons, was much further extended than it is at this day, and happily, in this country, the art of poisoning has been less studied and perfected, than in some of the more Southern ones, where men are prompted, and accustomed to take so base and cowardly a method, to satisfy their jealousy and revenge. It is related, and credited, that, in Italy, methods are known, and practised, of poisoning persons, by giving them a drug, which will not prove fatal 'till many months afterwards, or, (which is more probable,) producing the same effect by repeated, and imperceptible, doses gradually undermining and destroying the health. May these, and the various kinds of poisons they are said to prepare and employ, ever remain a secret amongst us. It is a secret
of

of too dangerous a nature for a man to wish to be in possession of.—The same may perhaps be said respecting the Woorara poison, with which the Indians smear the points of their arrows, which has been mentioned by Dr. Bancroft in his History of Guiana. The smallest particle of this, introduced into the system by a wound, proves instantly fatal, and yet an animal so killed may be safely eaten, it being no longer a poison when introduced into the stomach.

The poisons known amongst ourselves act, either mechanically, or chemically; on the primæ viæ, or on the nervous system. Thus pounded glass has been given, and occasioned certain death, by bringing on inflammation of the stomach and intestines: thus sponge has been given, to produce stoppage of the passage; and strong caustic alkali, swallowed hastily by mistake, has been followed by death. The former act mechanically, only on the parts to which they attain; the action of the caustic alkali, though chemical, is also only topical, and did it not, even in its passage, before it reaches the stomach, produce irreparable and fatal mischief, its power might be lessened, by

4 SUMMARY ACCOUNT

the mucus it met with, by oily or mucilaginous medicines, by fixed air, or by means of an acid exhibited.

The poisons, however, the effects of which we are commonly called upon to obviate, may be considered under the different heads of the mineral, vegetable, and animal poisons, upon each of which, it may be of use, to make some few general observations.——Of the minerals, the saline preparations of mercury, lead, and antimony, i. e. the solutions of these metals in different acids, are, in very small doses, useful and powerful medicines, but, given in no great quantity, are active and virulent poisons. When these have been taken, it has been recommended to dilute largely with water, to evacuate by vomits, and to blunt their acrimony by oil, milk, &c. but no medicine will have so immediate, and beneficial, an effect, as a solution of any alkali, which, uniting with the acid, decomposes the salt, and precipitates the metal in the form of a calx, nearly, or wholly, inactive. When this is done, the former methods may be used with much greater advantage.

It

It is surprizing, that so obvious a remedy against the action of these metallic salts should not have been noticed by Tiffot, Buchan, and others who have written on the subject; especially as these excellent authors wrote avowedly for the public. In the *Edinburgh Medical Commentaries* (Vol. 6. Part 3.) * I have endeavoured to supply this deficiency, and given a remarkable instance of the good effect of salt of tartar, in the case of a woman at Liverpool poisoned with corrosive sublimate. This is one of the most powerful of the metallic salts, and is also difficultly soluble in water, and as in this case it was swallowed in a solid form, it only acted, as it dissolved, gradually and repeatedly; the violent symptoms produced by its solution yielded, almost instantaneously, to the alkali.

Medical men are often called in to cases of poison, where the particular kind swallowed cannot be known. There, it is always prudent to give, instead of water alone, water in which an alkali is dissolved. If the ill effects arise from a metallic salt in the stomach, such as
subli-

* See, in the following pages, No. II.

sublimate, sugar of lead, extract of lead, or tartar emetic, all future action of it will immediately be guarded against. And should it be arsenic, the most dangerous and insoluble of the metallic poisons, the addition of the alkali would serve to render the arsenic more easily soluble in water. In this case, however, the stomach should be washed with very large quantities, as arsenic requires about fifteen times its weight of water to dissolve it. And in all these cases, besides the alkali, it is advisable to give water most copiously, and also oil, and to promote vomiting as expeditiously as possible.

We see then, that with respect to mineral poisons, there is a rational ground of hope, that, by a proper management, they may be decomposed, their effects counteracted, and the danger resulting from their exhibition be guarded against, and prevented.—But the poisons taken from the vegetable kingdom cannot be said to admit of such a remedy: we know no certain means of counteracting their effects, and all medical help is almost solely confined to attempting, as speedily as possible, to evacuate them. Nor can this be done, even
by

by the most powerful emetics, as the white vitriol, verdigris, or emetic tartar, unless they be administered at an early period, before the poison has rendered the stomach insensible to any stimulus, or has brought on such a degree of spasm as to create an impossibility of vomiting. For one or the other of these is the certain consequence of their continued action on the stomach, they then cannot be evacuated, and their continuance there is inevitably fatal. Of the suddenness and certainty of the action of poisonous vegetables, we have had two remarkable *recent* instances, (in 1781,) the one in the case of Sir Theodosius Boughton, poisoned by the distilled water of the lauro-cerasus, (frequently, but improperly, employed in cookery, in small quantity, under the name of laurel water,) which event gave rise to a useful work on the poisonous vegetables of this country, by Mr. Wilmer; the other, in that of a youth poisoned accidentally, at Liverpool, by eating the roots of the oenanthe, or hemlock-dropwort, the circumstances attending which I published: they are inserted in the London Medical Journal for July, and, (together with a plate of the plant,) in the London Maga-

Magazine for August, 1781.* Similar are the effects of the *cicuta aquatica*, or water-hemlock, which, like the two former, almost certainly and speedily produces death. Mr. Wilmer enumerates further the following indigenous plants of a poisonous quality, though their action is neither so speedy, nor so unavoidably fatal, as that of the foregoing ones.

T H E

<i>Hyoscamus Niger,</i>	<i>Henbane :</i>
<i>Belladonna,</i>	† <i>Deadly Nightshade :</i>
<i>Napellus Coeruleus,</i>	<i>Blue Monk's-hood :</i>
<i>Cynocrambe,</i>	<i>Dog's Mercury :</i>
<i>Stramonium,</i>	<i>Thorn Apple :</i>
<i>Cicuta Major,</i>	<i>Common Hemlock :</i>
<i>Agaricus Muscarius.</i>	<i>Bug Agaric : and</i>
<i>Fungus Piperatus,</i>	<i>Pepper Agaric.</i>

The

* See No. III.

† Children, and ignorant people, are often induced by their appearance to eat of the berries of this shrub. In Doddsley's Annual Register for 1780, we read of two women, who, gleaning in a field near Cambridge, were found nearly dead from this cause, and were successfully assisted by Mr. Hoffman of that city. Other instances are there also brought, of persons dying, or being almost dead, from having eat of these berries or the plant itself. The method

The effects they produce, according to that gentleman, are, vertigo, faintness, delirium, madness, stupor, and paralytic or apoplectic symptoms. To obviate these, he advises the immediate exhibition of active emetics, cathartics and glysters; and the copious use of some acidulous vegetable liquor, as weak sparkling perry or cyder; and for the paralysis which may afterwards remain, the usual means, of sinapisms, blisters, and electricity. Tissot recommends, as what is chiefly to be depended upon in such cases, to give a large quantity of vinegar, besides the evacnants before-mentioned, and says, that by means of these, together with large dilution, 37 soldiers, who had eat the hemlock drop-wort roots by mistake for carrots, were all saved, except one, who died before he could be assisted. This celebrated author considers the noxious effects of these vegetable poisons as depending on their narcotic quality, and similar to those of opium.

C

Opium

method Mr. Hoffman recommended, and which he has before time found to succeed, is this. To give a vomit as soon as possible, and, in the course of the day, about a pint of vinegar, or lemon juice, mixed with an equal quantity of water, and to walk the patient about to prevent sleep, which he thinks would be fatal.

Opium is sometimes taken in too large a dose by mistake; sometimes by design; and occasions stupor, convulsions, apoplectic symptoms, and death, unless quickly and powerfully counteracted. Dr. Mead has said much in favour of acids, in this intention, given with alkaline salts in repeated doses; but we ought probably to place a much greater dependance on promoting evacuation by the methods before proposed. It is also believed to be highly necessary to prevent the person from sleeping, by using every method to rouse the action both of the body and mind, to stimulate the nose by volatile alkali, and the skin by blisters. Bleeding will also certainly be of use, and lessen the determination of blood to the head, which there is some ground to fear every stimulating method may possibly contribute to augment. Dilution has been recommended in this case, but is much more indicated, and indeed seems almost solely to be relied on, when persons are dying from the effects of a poison, not less certain, and which, as it is sought after with avidity, and swallowed with profusion, oftener calls for our attention. I mean the different kinds of ardent spirits; gin, rum, brandy, &c. which besides bringing
 thousands,

thousands, gradually, and silently, to the grave, in very many instances, prove fatal in a few hours when drank in large quantity. The frequency of these accidents in the great sea-port town of Liverpool, drew my attention to a subject of such importance, and induced me to draw up, what appeared to me the most eligible method of attempting the relief of persons thus unfortunately circumstanced. This paper *, which was dispersed in Liverpool, was reprinted and preserved in Dr. Duncan's Medical Commentaries for 1780, Part 3. I therein proposed, 1st. to evacuate the poison by the means before enumerated; or 2dly, to dilute it, and thereby weaken its action. I have advised also the warm bath, bleeding, blisters, warmth, friction, and motion; but have laid the greatest stress upon largely diluting that poison, which, in such circumstances, we in vain attempt to evacuate. This I proposed doing by passing a pipe, something like a catheter, beyond the glottis, and pouring down, through that, very large quantities of water only, (which probably may be best cold,) or of water mixed with vinegar, or with any

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acid.

* See No. IV.

acid. In the Reports of the London Humane Society for 1780, I have communicated the case of a soldier * whom I rescued from death by pursuing this mode of treatment.

The last class of poisons, but on which I mean not here to enter minutely, is that of the animal ones. Amongst these we might reckon several morbid ones, particularly the venereal, and variolous, matter, which act on the system, inducing disease, and assimilating to their own nature the juices of the body into which they are admitted. These are subjected to certain laws, and may be counteracted by certain means, appropriated for the cure of the particular diseases which they produce. It may not be amiss to observe however, that the same means, mercury, is found to counteract in some sort both the variolous, and venereal, virus. But leaving these as the object of more general medical enquiry, I shall proceed to such as more particularly relate to our subject.

To

* “ ——— Bailey, one of the Cheshire Militia, in very
 “ imminent danger from drinking brandy in a large quan-
 “ tity, by bleeding, diluents thrown down into the stomach
 “ by means of a pipe passed beyond the glottis, and proper
 “ attention, after remaining many hours in a very uncer-
 “ tain state, was with difficulty recovered.”

To remedy the bite of the viper, of the scorpion, and other venomous insects, olive oil alone applied to the part is related to be sufficient; though for further security, it has been recommended to suck the wound, and to take vinegar plentifully. But we are much more commonly, and seriously, alarmed, by the bite of a mad dog, or other mad animal; the frequent, though, I believe we may assert, by no means constant, effects of which are, heaviness, melancholy, hydrophobia, violent delirium and a dreadful death. Various medicines, some of little utility and which ought not to be relied on, have gained reputation as preventives of these effects. These medicines are mostly such as take off irritation and spasm; as bathing, musk, and opium; or such as promote perspiration and the other secretions. Dr. Mead speaks more highly than one would suppose it deserved of his medicine, of ash-coloured-ground-liver-wort and pepper, joined with cold bathing. The public confidence has been much placed on a remedy kept a secret, prepared, at Ormskirk in Lancashire, by Mr. Hill; but with what foundation that confidence has been placed herein, appears from its having failed of success in several instances, but particularly

ticularly in that of Mr. Bellamy of Holborn, of which the late ingenious Dr. Fothergill gave the public a circumstantial account. Nor will the following receipt for the making the Ormskirk medicine, communicated by a medical friend, and obtained from an authority which it seems with good reason may be depended upon, increase our expectations of success from its use.

Take elecampane, flowers of sulphur, liquorice powder, oyster shells burnt, of each as much as will lie on a shilling; alum, turmeric, bole armeniac, all in powder, of each as much as will lie on a six-pence, mixed.

From this, which is strongly believed to be the original receipt, some small deviations are made; e. g. a larger proportion of bole is now added*. Cobb's Powder, or the East India Specific, being a mixture of cinabar and musk, promises much fairer. Mercurials, especially if

* It is observable that Dr. Heisham (de Rabie Caninâ) from analysis, concludes Hill's medicine, which he examined nicely, to be compounded nearly of these ingredients, with the addition of a few drops of oil of aniseeds.

if used 'till they bring on an increased secretion from the salivary glands, (which seem a principal feat of the disease, or, at least, are the parts to which it has the principal determination,) afford a much more rational ground of hope. Although many respectable characters have declared, that nothing yet known could be depended upon to cure the hydrophobia, or scarcely to prevent it, yet we may place some degree of dependence on mercury, if there be only time to produce salivation, and if its exhibition be pursued with regularity and perseverance. To judge properly on this subject, we should attend to what has been said upon it by the late Dr. James, who first proposed the mercurial treatment in his Essay on Canine Madness, and by many other writers, particularly amongst the French, who have pursued this idea with advantage; Sauvages especially. A late work published by authority at Paris, of which I have given an abstract in Dr. Duncan's Medical Commentaries, Vol. 8.* lays down as the most successful, a mode of treating persons bit by mad animals, of which salivation appears to be the basis, if not the only essential part; though they endeavour to
prevent

* See No. V

prevent the mercury salivating by purging every four or five days, and lay the great stress on the external application of the mercurial ointment round about the part which is bitten, and to the edges of the wound, which should be enlarged and brought to suppurate,

Of fifteen persons bit nearly at the same time by a mad wolf, in December, 1775, in the district of Maçon, eleven were treated in this manner, by Monsieur Blais, a physician at Cluny, and the four who were not treated thus died, in a few days, raving mad. Of those under this gentleman's care, one died with the true hydrophobia, (though without convulsion or any violent symptom,) after pursuing the treatment regularly ten days; a second died much in the same manner, after using it near a month, during which time however he had made a practice of drinking privately to great excess; and a third, a boy, died at the expiration of six weeks, under the care of his friends, not with any symptom of madness, but from a caries of the scull neglected. (A fourth also died with the hydrophobia six weeks after having passed through the treatment, but as, subsequent to it, he had exposed himself

himself to fresh danger from a like cause, it is not clear that he should be included in this number.) The remaining seven recovered : in most of them salivation took place, and in all, the inunctions were continued a month or more. From these, and other like instances, there seems reason to conclude, that, not on the quantity of mercury administered, but on its bringing on salivation in time, depends the only rational ground of security from canine madness.—But in preference to any medicine, one should advise, when it can be done, the immediate removal of the part bit ; destroying either by the knife, caustic, or the actual cautery, all the flesh in which may be lodged so formidable and fatal a virus, the effects of which are gradual, and in this respect similar to those of the matter used in inoculation.

It may not be improper to add here some considerations suggested very lately by the following accident. In the evening of December 14, 1783, an old woman, a nurse in the Liverpool Infirmary, privately took into her bed room, which had no chimney, an iron pot with some lighted charcoal, by the vapour

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of

of which she was probably soon destroyed, and in the morning, on forcing the door open, was found dead.

Nothing can be more dangerous, or destructive, than the vapour emitted by burning charcoal, of the effects of which, Dr. Guthrie, physician at Petersburg, has given a very curious account in the Philosophical Transactions for 1779, vol. 69. He observes that accidents from this cause are so frequent in Russia, and are there so familiar to the people, that medical assistance is never called in to remedy them. The Russians heat their apartments by means of stoves, in which they burn wood, and, to save fuel, when the wood is burnt quite clear and bright, they close up the vent, or chimney, of the stove to keep in the heat. But if, as often happens from negligence and inattention, any bit of wood remain not burnt clear, but of a blackish colour, the noxious vapour, or *ugar* is certain to spread itself through the chamber, and is productive of the following effects. All the persons in the room are affected with a drowsiness, and a reluctance, or inability, to move, and, if unaccustomed to it, with

with a nausea, and an inclination to vomit. Any one disposed to sleep falls into so sound a sleep, as renders it difficult to awaken him, nor is sensible of any pain or inconvenience. A little before death, however, he groans, so as sometimes to call to his relief those who are near. The steps taken to assist him, and which frequently succeed, if removed or discovered within an hour, from the commencement of this insensible state, (beyond which time they think all probability of succeeding at an end,) are these. He is carried out and laid upon the snow almost naked; his stomach and temples are then well rubbed with snow, and they pour cold water or milk down his throat. These frictions are continued till the body is restored, from a livid, to its natural, colour, and life returns. A violent head-ache, which often remains, they cure by binding on the forehead a poultice of rye bread and vinegar.—It is a very curious fact which the same gentleman informs us of, that effects, perfectly similar, are produced (which are remedied in the same manner) by “an incrustation formed on the “insides of the glass windows during severe “frost, composed of condensed breath, per-

“spiration, &c.—the phlogiston of candles,
“and of the stove, which, when converted
“into water by a thaw, lets loose a principle
“producing all those terrible effects on the
“human body, which the principle emitted
“from charcoal is so well known to do in this
“country, (*Russia*,) where people every day
“suffer from it.” They cannot be persuaded,
however, that these effects are occasioned by a
cause apparently so trifling, but attribute them,
without the least foundation, to the former
one, a mismanagement of the stove. By this
account we find then, that exposure to free air,
and continued frictions, succeed in recovering
persons in these circumstances. Dr. Guthrie
thinks the cold applied may probably contri-
bute thereto, by “some how or other freeing
“the body from the load of phlogiston with
“which the system seems to be replete”; as
the person becomes considerably colder, when
recovering, than when first brought out of the
room.

A mode of treatment differing however in
this respect, the application of warmth, has
been found successful, in restoring to life per-
sons

sons nearly dead from a cause apparently similar,—the vapour emitted from burning lime stone, of the fatal effects of which we have had repeated instances. Some years ago a very fatal accident happened from this cause in Liverpool, where the vapour from a lime-kiln penetrated through the wall of a house adjoining, and occasioned the death of several persons. In the Reports of the London Humane Society for 1778, I have related the circumstances of two women, who, having lain down to sleep in a hut, built adjoining to a lime-kiln to keep the tools in, were found, a few hours afterwards, the one dead, the other nearly so, but by care, and diligent perseverance for several hours in employing the means recommended by that excellent institution, she was with difficulty recovered.

Great numbers of people have been destroyed, almost instantaneously, by sudden exposure to mephitic vapours, the gas emitted by fermenting liquors (in the large vessels of breweries) air long confined and stagnating, in wells, vaults, privies, &c. From some parts of the earth there arise vapours highly
noxious,

noxious, and injurious to animal life ; as for instance from the Grotto del Cane in Italy*, in which an animal exposed to them a very short time is inevitably destroyed, but, if withdrawn

* It has been doubted, whether this vapour is really deleterious in its nature, or only, by its density, unfit for respiration, and therefore occasions the death of animals immersed in it. In this idea, in the winter of 1768, Richard Paul Jodrell, Esq; (a gentleman well known in the literary world, as a man of genius and erudition) and I, tried the effect of it upon a viper, which we had procured for that purpose. It was no sooner plunged into this *vapour* in the grotto, (*which* arises apparently about a foot in height,) than it manifested evident signs of its being greatly incommoded. It endeavoured to get to the walls, and being prevented, raised its head up as much as it was able, opened its jaws wide, seeming to gasp for breath, and after nine minutes, became motionless, but being then thrown out into the open air, soon recovered. Dogs, who generally are subjected to this experiment, are nearly dead in less than half that time ; but this reptile was made choice of, as it is known to be, if I may use the expression, peculiarly tenacious of life. That it will live long without any supply of air, or food, is very certain, and the one I am now speaking of accidentally furnished a sufficient proof of it. When recovered, it was replaced in the box in which we had brought it, and was shut up close, and carried back with us to Naples, where it was laid by and forgotten, 'till on Mr. Jodrell's preparing to leave that city three weeks afterwards, the box was again found, and the viper in it, alive and vigorous.

withdrawn before it be quite dead, and laid in the open air, it will gradually recover; though in consequence of such experiment, especially if repeated, its life is said to be much shortened, and that it will linger for a few months and then die. This has a property, which is common to the other mephitic vapours, and which affords an opportunity of detecting their presence, and guarding against them. They extinguish flame; and it is therefore highly imprudent for any one to venture down into a place long shut up, without first trying, by letting down a candle, whether the air be such as will admit of its continuing to burn, and, of consequence, may, safely be respired.

When life is destroyed, or rather suspended, from exposure to mephitic vapours, the immediate removal of the body, and placing it in the open air, is of the most urgent necessity, and will alone, sometimes, be sufficient to bring about a recovery. But it will frequently, in such cases, be proper to have recourse to frictions, inflation of the lungs, and the other means recommended by the Humane Society,—an institution which does
great

great honour, and has rendered important service to the cause of humanity; which owes its introduction amongst us to the laudable zeal and exertions of Dr. Cogan and Dr. Hawes, and its support, to that spirit of benevolence and compassion, which forms so bright, and striking, a feature in the national character.

II.

Observations on Mineral Poisons.

IT did not, 'till very lately, occur to me, that in treating of the antidotes, or remedies, for mineral poisons, alkaline salts are omitted to be recommended, both in Tiffot's Advice to the People, and Buchan's Domestic Medicine, books very generally read and esteemed. As the effects of these poisons are often so sudden as not to admit of calling in medical assistance, it seems the more necessary to add this remedy to those recommended for common use to the people; and as the following history of facts will tend to demonstrate the importance, and to establish the reasonableness, of this practice, (although it happened some years ago,) I have thought it might be productive of good to society that it should be more extensively known.

In 1774, one Jones, a cow-keeper of Liverpool, was convicted at the Lancaster assizes, of poisoning his sister-in-law, in revenge for her

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having

having opposed him in the sale of some property, of right belonging to the children of her sister, his former wife. Under an appearance of reconciliation, he had treated her, and the wife of the intended purchaser, William Ashcroft, one morning, at a public house, with some ale, which he himself had warmed. He put sugar in it, and had repeatedly poured it backwards and forwards from one cup into another. The sister-in-law went thence into the neighbourhood of Ormskirk (thirteen miles distant) where, in a few days, she died. The Coroner could not attend as soon as was desired, and the body was in a very putrid state when it was opened. In the stomach were found, some small particles of what was judged to be corrosive sublimate; but of this circumstance I was not informed 'till after the other woman was better.

Mrs. Ashcroft came to me, May 5th, a week after her drinking this ale. Immediately after she took it, she set out to go to Prescott (seven miles) part of the way in a carriage, the rest on foot. She had not gone far before there came on a violent pain in her stomach, with continued vomiting, and intolerable thirst,

so

so that she stopped to drink water almost at each ditch. Her tongue, from her own account too, was considerably swelled. After much vomiting she was somewhat relieved; but, to the time she applied to me, she had continued to vomit up every thing she took, and complained of a heat and pain in her stomach; at some times much more violent than at others. As she seemed not in much pain then, and had vomited so frequently, I only advised her, whenever she was sick, to wash her stomach plentifully with chamomile tea; hoping, that in a little time, the vomiting might be checked. The account of the death of the other woman alarmed her greatly, (as they had drank out of the same cup,) and on the 7th in the evening she was extremely ill; her stomach swelled, and was violently painful, and she could scarcely speak to be heard. On considering the story she had told me, of the man's having put sugar in the ale, and bestowed so much pains in mixing it thoroughly, it occurred to me, that the poison added might probably be corrosive sublimate, which does not easily dissolve, and that some of it, having been swallowed undissolved, might remain in that state enveloped in the mucus and attached

to the coats of the stomach; which, as it gradually dissolved, irritated, and caused heat, pain, and vomiting. In this idea, I gave her a few spoonfuls of a solution of salt of tartar, with a view to decompose the sublimate, and she had no sooner swallowed it than she was easier. A little while after she took a vomit, and I caused some blood to be taken away to guard against inflammation of the stomach; she was much better the next day, eat her dinner well, and did not vomit; but, on the 9th at night, the pain returned, with great violence, and yielded, as expeditiously as before, to the solution of salt of tartar. I now first heard of there being something found in the stomach of the other woman, supposed to be sublimate; and, on questioning my patient, learned, that she had always been most relieved, when, after several efforts, she had vomited up a small quantity of something, which, as she herself expressed it, tasted like milk which had stood in a brass pan. From these concurring circumstances, I had now no longer doubt of the poison being, as I had supposed it; sublimate; and, from the return of the symptoms, concluded that there was still some of it retained, whose solution, and action, was only very gradual.

dual. After repeating the vomit, I advised her to continue constantly the solution of salt of tartar. This, however, she had neglected, and on the 11th she had a fresh attack, which yielded readily to a repetition of the same means. As her objection to the salt of tartar was its disagreeable taste, I ordered her some pills, containing each three grains of it, which (convinced of the necessity) she did not omit taking. On the 15th she was perfectly well, and so continued.

The conclusion I would draw from hence, is this; in all cases of poison it is prudent immediately to give a solution of an alkali, followed by a vomit. If the poison be corrosive sublimate, an alkali, either fixed or volatile, will decompose it, and precipitate the metal in a form nearly inoffensive. It will have a similar effect on the sugar of lead, the extract of lead, emetic tartar, or any metallic salt. If the poison be arsenic, Newmann observes, "that alkalies will very plentifully dissolve it." And if so, as it is difficultly soluble in water, the vomit will then succeed the better to discharge it. Whether or no sulphur, exhibited in any form, might lessen the danger of
of

of arsenic is not clear, though these two, when united, are not poisonous. If the poison be of the vegetable class, an alkali can be of no disservice, nor interfere with the other means of remedying by evacuation, nor yet by the subsequent use of acids, so strongly insisted on by Tissot, as counteracting the effects of narcotics; since acids given together with alkaline salts, are pronounced to be attended with great success in this case, by Dr. Mead, and others.

To supply the omission then in those popular writers, might not the following directions be given on this subject? “ When symptoms of
“ poison appear, mix a tea-spoonful of any of
“ the following articles, salt of tartar, salt of
“ wormwood, pearl-ash, pot-ash, spirit of
“ hartshorn, or of sal volatile, with half a
“ pint of water, and of this let one half be
“ given to the patient immediately, and the
“ other in a short time afterwards. It will
“ sometimes give great relief, and the vomit-
“ ing will cease. That, however, is still to
“ be promoted, and if it does not return on
“ drinking warm water, &c. after waiting a
“ while, it will be proper to give a vomit of
“ ipecacuanha, or, if that is not sufficient,
“ one

“ one still stronger. After each vomiting, a
“ dose of this solution of salt of tartar should
“ be given, and it may be repeated every two
“ or three hours, especially if the pain of the
“ stomach returns. It should be continued
“ too, in small doses, for some time after the
“ symptoms disappear. If none of these salts
“ are at hand, a little wood-ashes mixed with
“ boiling water will answer the same end,
“ suffering them to stand 'till they settle, and
“ pouring the water clear off, or filtering
“ through linen. By tasting it, the degree of
“ saltiness will determine if the solution be
“ strong enough; if it be not disagreeably so
“ it may be given.”

At Liverpool, August 27, 1783, a young child of Captain Bibby's, playing in a neighbour's house, got to some Jacob's-Water sweetened, placed there to poison flies, and drank so much as occasioned its dying the day after convulsed. As this poison is often used, and as similar accidents in consequence thereof are by no means rare, the following cautions may
be

be useful. 1. If this poisonous mixture (which ought not to be indiscriminately sold) is to be used at all, it should be placed out of the reach of children, and mixed up in a manner dirty enough to disgust, and deter any one else from a desire to taste it. 2. As soon as it is known that a person has unfortunately taken any of it, immediate assistance should be procured; a vomit should be given directly, and salt of tartar, or pot-ashes, dissolved in water, should be drank very freely. The poison sold under the name of Jacob's-Water is sometimes arsenic dissolved in water, but that properly so called is only a weak solution of corrosive sublimate; and in that case there is the strongest reason to believe, that by taking a little of the above alkaline salt after it, (and the sooner after it the better,) if violent symptoms are not already come on, no danger whatever would ensue: and even if such symptoms have appeared, this is one of the most effectual means of relieving and removing them. And if the poison swallowed be a solution of arsenic, this would be one of the most likely means of guarding against its effects, whilst at the same time it will not interfere with any of the usual methods of obviating the danger.

III.

Case of a Boy poisoned by the Root of the Hemlock Dropwort, on the 9th of June, 1781.

THE eldest son of the Reverend Mr. Kirkpatrick, a dissenting minister, about nine years old, rambling with several other children in the fields adjoining to the Leeds canal, near Liverpool, gathered, and gave to the others, a number of the roots of the Hemlock Dropwort, which he believed were ground nuts, and of which he eat a much greater quantity than the rest. As he was returning home he grew giddy, and if he had not been prevented, would have reeled into the canal. His inability to direct his motions encreased gradually, and he was soon affected with stupor and convulsions. His mother, apprized of his situation, speedily came to him, and immediately, as she said, conceived the idea of his having eaten something, the effects of which were similar to the poison administered to Sir Theodosius Boughton, 'till

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which

which time no such thing had been apprehended. Some water out of the canal was given him to drink, and he vomited a considerable quantity of the root he had swallowed; he however grew worse, raved, became heavy, and convulsed, and was carried into a house adjoining; Mr. Shertcliffe, a surgeon in the neighbourhood, was sent for, who, with a view to evacuate what he had taken, gave him a solution of emetic tartar, and a purgative glyster.

He had swallowed at least twenty grains of the tartar emetic, when I was sent for to him about eight in the evening. I found him quite in the epileptic state, with the pupil of the eye vastly dilated, total insensibility, and all the appearance of a person in the last degree of intoxication. Convinced that unless the contents of the stomach could be expelled, no hope of his recovery remained, I gave, in solution, a scruple of white vitriol, most part of which was got down.

The convulsions for some time past had been strong and frequent; they seemed to begin with an effort, as it were to vomit,
(though

(though after he got into the house he never vomited in the least). The head was drawn to the right side, and thrown back, general spasms succeeded, the eyes started prodigiously out from the sockets, and the tongue was thrust out and forcibly bit. Some æther was sent for, and I poured a small quantity into the mouth, on the temples, &c. It was thought at times to relieve the fits, which interrupted the circulation, so as to render the pulse imperceptible, and often to give reason to suppose it was irrecoverably stopped. In this manner, however, the scene was closed at last, rather placidly, about ten o'clock at night, after he had suffered thus above four hours. The respiration, though slow, continued tolerably easy almost to the last. The glyster operated a little before he died, and a very offensive stool followed.

Notwithstanding the boy had thrown up a considerable quantity of the root, yet I had no doubt, but that such a part of what he had eaten remained in the stomach, as would render every effort to save him ineffectual. The event unfortunately answered my expectation, and dissection confirmed the truth of the conjec-

ture. Mr. Shertcliffe found in the stomach above an handful of the root, and noticed very sensibly the smell peculiar to it, the moment he cut into the cellular membrane, tho' it was not twenty four hours after death.

It was at first supposed, that what the boys had gathered and eaten was the water-parsnip; and afterwards, that it was the water-hemlock. Indeed Boerhaave in his *Historia Plantarum*, under the article *Sium* (water-parsnip) commends the first species for its aperient, emollient, and detergent qualities, but adds, "that he never had dared to administer it, from the resemblance which it bears to the second species, the *cicuta aquatica*, of which those who have eaten, unless relieved by vomiting, died dreadfully, and singularly convulsed." The latter (the water-hemlock) which is extremely poisonous is frequently confounded also with the hemlock dropwort, the plant now spoken of; which is equally dangerous, and is termed by Lobel, Ray, and others, *œnanthe cicutæ facie*. This however, it is certain, was the one pitched upon by the boy who with difficulty recovered, as the root he and his companions had eat of.

Four of the other boys in company had partaken, though more sparingly, of the noxious repast; but, on the first alarm, vomits having been exhibited, they all escaped. One however was with difficulty made to vomit, tho' he took largely both emetic tartar and ipecacuanha, and he was affected with giddiness, drowsiness, and twitchings so much, that for some hours his recovery remained doubtful. He told me he had eat one root and an half; and more than two hours had elapsed before he was sensibly affected by it.

This unfortunate accident, as well as the one which was lately the subject of a judicial discussion, proves how fatally certain is the effect of the poisons of this class. These vegetable poisons, do not, like the mineral ones, become fatal by producing inflammation of the stomach: though at first they stimulate and endeavour to promote their own discharge, yet their baneful action is solely on the nervous system. Like to opium, or spirits, they bring on such a degree of insensibility, or as some suppose of spasm, as wholly to destroy or counteract the power of the stomach to expel them, whilst their continuance there must inevitably

vitably prove fatal. Whereas many mineral poisons may be decomposed by any alkali; and even the danger from drinking spirits, may be greatly lessened, by conveying into the stomach (by means of a pipe passed beyond the glottis) large quantities of water to dilute them, after the power of vomiting as well as swallowing is lost. (See two papers which I drew up on this subject, and which are inserted in the *Edinburgh Medical Commentaries*, Vol. VI. page 325, and in those by Dr. Duncan, part III. 1780.)

To render a poisonous vegetable in the stomach, which cannot be evacuated, inactive, is what we are yet unequal to;—to dilute it would probably be at least a vain attempt, if it did not (by the liquid acting as a menstruum) elicit, and render more active, the poisonous quality;—and unfortunately, to evacuate it after it has remained long enough to produce, in a certain degree, its effect on the stomach seems next to impossible. We should, however when there is the least ground to suspect any thing of this kind, immediately endeavour, by an active emetic, to evacuate the stomach whilst there yet remains a possibility of doing it.

it. On the early exhibition of a vomit in such cases depends its operation, and on that only, perhaps, the security of the patient.

*Botanical Description of the Hemlock Dropwort,
and of the Earth Nut.—See the Plate.*

OENANTHE CROCATA.

OENANTHE CICUTÆ

FACIE.

HEMLOCK DROPWORT.

BUNIU BULBOCASTA-
NUM.

Earth, Kipper, Pig, or

Hawk-nut.

A. The roots.

B. The leaves.

C. The universal umbel.

a. The partial umbel.

b. The universal involu-
crum.

c. The partial involu-
crum.

d. A single hermaphro-
dite flower.

* The same magnified.

e. The calyx.

f. The petals.

g. The stamens.

h. The germen.

A. The roots.

B. The leaves.

C. The universal umbel.

a. The partial umbel.

b. The universal involu-
crum.

c. The partial involu-
crum.

d. A single flower.

* Ditto magnified.

e. The calyx.

f. The petals.

g. The stamens.

h. The germen.

i. The seed.

i. The

- i.* The seed. *k.* The same when ripe
k. The same as it divides divided by Nature.

into two.

l. A male flower.

m. The petals.

n. The stamens.

o. The hermaphrodite

flowers standing in the disk ;
 and are fertile.

p. The male flowers form-
 ing the ray; and are abortive.

This plant grows in mea-
 dows and other pasture lands,
 and in woods, in which it is
 most abundant.

This plant is found, scat-
 tered up and down the banks
 of rivers, and in abundance
 upon those of the Thames.





Bunium-Bulbocastanum
Earth Kipper, Pig or Hawk-nut



Oenanthe-crocata.
Hemlock Water-dropwort.

IV.

On the Mode of assisting Persons dying from drinking Spirits.

MANY persons are destroyed suddenly by drinking large quantities of spirits. Their first effects are stimulant; they quicken the circulation, and occasion much blood to be thrown upon the head. They afterwards prove sedative; they bring on stupor; loss of reason, total; of motion and sensation, almost total. Their effects may be partly owing to their entering, in some degree, into the circulation, but depend chiefly, when violent, on their action on the nerves of the stomach. In consequence, the brain is affected, and the nervous influence suspended if not destroyed. All the parts of the body therefore partake of this insensibility. As the skin in some cases may be burnt even without feeling, so the stomach and intestines may be stimulated considerably without any effect. The motion of

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the heart and lungs is much enfeebled and interrupted, but continues irregularly 'till death enfues.

To rescue the person from so dangerous a state is extremely difficult. To counteract these effects by medicine is less likely, both as the power of swallowing is lost, and as, probably, little or no absorption then takes place. But we ought to endeavour, 1st, to evacuate the poison; or else, 2dly, to dilute it, and thereby weaken its action. With a view to the first, brisk vomits may be given; but, from the want of irritability of the stomach, these often will not act, unless given early, when they are of great service in case of intoxication. A Dock-porter who died in the Liverpool Infirmary, February 28, 1780, got down, over night, nearly 12 grains of Emetic Tartar dissolved, yet it produced little or no effect, though he lived 'till the next day. Purges are also proper, but liable, though in a less degree, to the same objections. Sharp Glysters may be administered and will produce some evacuation, but their operation does not extend far enough. Large Glysters, of water only, or of water in which purging salts

salts are dissolved, thrown up with some force by a syringe, might be of more service,

Oil has been advised to be given, to help to evacuate the spirit, or to weaken its action.— But when the inactivity of the stomach is become so great and the danger so pressing, there seems more reason to expect success, from largely diluting that poison, which we in vain attempt to evacuate. When intoxication has been produced by drinking strong liquors, large quantities of water, or weak liquids drank, are found to lessen it very considerably. And though the power of swallowing be lost, yet by means of a pipe (as a flexible catheter) passed beyond the glottis, or even down into the stomach, water might be poured in, in such a quantity as was judged sufficient to dilute and carry off the liquor in the stomach. To the water might be added with advantage probably, vinegar, or any kind of acid: or purgatives might be dissolved in it, to facilitate the poison's passing off by the intestines. A pipe of this kind too would afford the best method of introducing substances into the stomach to promote vomiting.

Putting the body into a warm bath, or the legs and feet in warm water, will be of use, by lessening the quantity of blood accumulated in the head and in the larger vessels : and some of the water may perhaps be absorbed. With a view to relieve the oppression, bleeding, and opening the temporal artery are advisable. If the pulse is found to become freer and fuller on losing some blood, more may be taken away. Blisters may also be applied with advantage.

The coldness of the extremities, and the evident difficulty with which the circulation is kept up, point out the propriety of assisting it by warmth and friction applied to the skin (as in recovering drowned persons). Motion, to prevent sleep, may probably be serviceable in such cases. Great care should be taken to loosen the neck-band, garters, and every kind of bandage, and that the body should lie in a natural, easy, posture ; on the side is perhaps better than on the belly, tho' that has been recommended, that the stomach might the easier discharge its contents. The breathing should not be obstructed, nor the neck lie low, or in a bent position.

V.

Observations on Canine Madness.

WHEN men of undoubted professional knowledge, candour, and humanity, stand forth to destroy the public confidence, in a matter of such moment as a preventative for madness, this can only be supposed to arise from a thorough conviction of the inefficacy of the means proposed, and an ardent zeal for the cause of truth. Well aware that they are hereby depriving numbers of that great cordial, hope, and reducing them to a state of horror and apprehension, little short of that which they wish to guard against, nothing but a desire of obviating the fatal consequences of an ill grounded confidence, and of exciting the endeavours of men of science, to discover more certain remedies than are yet known, could induce them to take such a step.

Dr. Fothergill, in the case of Mr. Bellamy, and Dr. Vaughan, of Leicester, in three cases which

which he has published, have fully proved, that all the methods recommended for that end, are insufficient for the cure of the Hydrophobia, when once commenced. The patients all died in the course of one or two days from the appearance of this symptom, notwithstanding the most attentive and judicious treatment. From these cases, they conclude, that no dependance is, in reality, to be placed on the Ormskirk Medicine, before so much confided in; and they have each declared their opinion, how doubtful and uncertain, not to say useless, are all the other methods hitherto proposed, to prevent the ill consequences sometimes resulting from the bite of mad animals. The attempt, then, to recommend and enforce a plan of treatment, agreeable to reason, and supported by experiment, must meet with approbation, and may be productive of essential service to society. May it not very easily happen, that a remedy, the gradual exhibition of which may prevent the attack, would prove wholly insufficient for the cure of the Hydrophobia? or is the inference just, that because the action of mercurials, applied for three or four days at most, will not cure the disease in its last hasty stage, the
same

same remedy would have been of no avail in the interval between the bite and the attack, which was (in these cases) of one, three, and nine months? During that period, a gradual and sufficient action of the mercury might have been excited; whereas, when the Hydrophobia has appeared, there is scarcely ever time for any such effect. There is some reason to conclude too, that under certain diseases, the system is less capable of being acted upon by mercury, which, though applied in large quantities, seems then not to produce its usual effects. I mean not to dwell upon the reasonableness of a practice, in which the action of the remedy is principally determined to the part where the Virus chiefly exerts its baneful powers, *viz.* the Salivary Glands, nor yet upon the authority of the late Dr. James, and the celebrated Sauvages, who have largely insisted on the beneficial effects of mercury, to prevent the dangerous consequences of the bite of mad animals. Not to swell this paper to an improper bulk, I purpose only to give a brief account of a pamphlet, published at Paris by order of government, entitled, “*Methode éprouvée pour le traitement de la Rage,*” wherein we are informed of the success of a
mode

mode of treatment, of which mercurial inunction is the basis and most essential part, laid down by Monsieur de Laffone, first physician to the King of France, and tried in eleven out of fifteen persons dreadfully bit and torn by a mad wolf, on the 8th and 9th of December, 1775, within twenty-four hours of each other. Three of these unhappy people, trusting to powdered oyster shells, and similar remedies of no use, were not subjected to this treatment, and died in a few days, raving mad; as did also a young woman, who did not apply for relief 'till two days before she died, and after the symptoms of Hydrophobia had commenced. The remaining eleven were, by the States of Macon, near which place the accident happened, put under the care of a physician of Cluny, Monsieur Blaise; and the account he gives of the success attending the method of treatment pursued, of which a summary is subjoined, is as follows:—One man, who, for ten days, exactly followed the plan laid down, whose wounds, though very large, supurated well, and were in a good state, and in whom the mercury seemed to begin to act, became melancholy, was seized with a horror and dread of liquids, and died within forty-eight

eight hours afterwards, though placidly, in his senses, and without being convulsed.—A second, whose mouth and gums had been slightly affected by the mercury, which he used near a month, grew delirious and furious, and after experiencing the symptoms of Hydrophobia for two days, died comatous. This man, however, it was found, had privately drank very large quantities of wine for three days together, preceding his delirium; and, it is supposed, this contributed greatly to his death.—A third, a boy, who continued the use of the mercurial frictions and antispasmodic medicines for eighteen days, and was doing well, being removed home by his friends, died there three weeks after, as is believed, only from the wound in his head not being taken due care of, and not from madness, as he drank freely an hour before his death.—

The remaining eight recovered, although one of them during the course became sad and melancholy, and another, a woman, delivered of a child during the time, manifested an aversion to liquids. Salivation took place in most of them, upon which, gradually excited, (though they endeavour to guard against it by repeated purging,) depends, most probably,

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in such cases, the only rational hope of security from Canine Madness. Dr. Blaise adds, that “ the treatment was continued, in all, “ above a month in the eight who got well,* “ six of whom had been grievously bit in “ parts not covered with the clothes; and “ that most of them experienced, nearly at “ the same time, symptoms of nervous affection, which might be attributed to the “ Virus too much attenuated and weakened “ by the remedies, to produce a manifest “ accession of Hydrophobia.” He concludes with these judicious remarks. “ It is most “ certain, that the remedies we have employed have been very successful; but they “ would have been much more so, had they “ been used early; and particularly, if, almost “ immediately after the bite, those external “ means had been made use of, which appear

* In the history of the Royal Society of Medicine at Paris, vol. 2. we are informed by Monsieur Blaise that, of these eight, one died with Hydrophobia six weeks after he was discharged apparently well; but it appears that, four days before this attacked him, he had passed his arm down the throat of an ox, believed to be mad, though the man is not said to have been bit by it. Monsieur Blaise also mentions his having since successfully treated two other children in this method, whereas a third, bit by the same dog and not so treated, died mad.

“ to

“ to me indispensably necessary, *viz.* deep
“ scarifications, cutting away the lacerated
“ parts, and those adjoining to the wounds,
“ the cautery, applying cupping glasses, and
“ establishing a copious suppuration, for a
“ long time, in the part bit; because it some-
“ times happens, that the saliva is lodged in
“ the cellular membrane, where it remains,
“ as it were, fixed and inert, ’till, brought into
“ action by some cause, it enters into the cir-
“ culation, affects the nerves, and produces
“ the train of symptoms of this most terrible
“ of diseases.” It now remains only to give
the mode of treatment proposed, which I
wish to do as concisely as I can consistently.
After opening the body by laxative glysters,
bleed once or twice, especially if there be any
symptom of madness, or any wildness in the
looks; use morning and evening, for an hour,
a warm foot-bath, or, if it can be had, a warm
bath; wash the wound repeatedly and long in
warm water, in which common salt, or rather
sal ammoniac, is plentifully dissolved, making
at the same time deep scarifications, cutting
away lacerated parts, or, which is preferable,
(when it is an animal which is bit,) applying
the actual cautery: This done, rub a dram

of mercurial ointment lightly round about the wound, which may be dressed twice a day, with basilicon or digestive, washing it each time with the salt and water. The mercurial ointment, however, is only to be applied once in twenty-four hours, and in the above dose. The body must be daily kept open by glysters, to which add one spoonful of honey, and two of vinegar; every four or five days, a gentle purgative is given, to prevent salivation. To excite vomiting once or twice will be of service, especially at the first, if there be frequent nausea or inclination to vomit. Once, or, if no inconvenience follows its use, twice a day, morning and evening, give a spoonful of wine, with twenty or twenty-five drops of eau-de-luce, to promote a gentle sweat. Let the patient take every day four grains of camphor, two grains of musk, and six grains of nitre, made into a bolus, with honey. In case of great restlessness and want of sleep, give, in a moderate dose, an opiate; but do not repeat it several successive days. The patient ought freely to use diluting drinks, mixed with honey and vinegar; but should the Hydrophobia already have come on, these and the foregoing medicines may be administered in glysters.

glysters. The food should consist chiefly of vegetables; but milk is to be avoided. This mode of treatment must be continued 'till the wound is healed firmly; a month at least, and longer, when the wounds have been considerable, or any symptoms have manifested themselves. Should the wounds put on a bad appearance, give the bark in strong decoction, as also where great weakness and languor remain. Useful animals, when bit, may be treated nearly in the same manner, only a triple quantity of the mercurial ointment should be employed. They should be kept up from mixing with others, and on the appearance of any symptoms of madness they should be immediately destroyed; as ought also dogs and animals of less use without hesitation. Thus far Dr. de Laffone. Several strong proofs of the success attending the use of mercurial friction, are inserted in the second volume of the Memoirs of the Paris Royal Society of Medicine, of which the instances given by Mr. Odoardi deserve particularly to be noticed. Of nine persons bit by a mad wolf, one (treated by another surgeon, but not with mercurial frictions) died of the Hydrophobia, the twenty-fourth day after.

after. The eight others who used this remedy under that gentleman's care, all did well. He mentions several instances which have fallen under his care or notice, in which mercurial frictions on the wounded part have preserved the patient from all danger, sometimes without producing salivation. Notwithstanding this success however, he esteems it the surest method to excite a slight degree of salivation; and perhaps this will be found to answer best, when attempted soon after the accident, and brought about not too hastily.

VI.

*On the Effects of Mercurials in the Cure of
obstinate Dysenteries.*

IT would seem, at first sight, that no medicine was less adapted to the cure of Dysentery than Mercury ; and yet the following cases, which, having occurred in the public Infirmary at Liverpool, were seen and known by numbers, will, I flatter myself, evince that the application of it in certain circumstances is founded in reason, and justified by success.

1. William Brown, a seaman, who had remained above two years on the coast of Africa, was admitted an out-patient of the Infirmary, May 23, 1776, for a Dysentery which he had laboured under for two years past, and for which he had taken a variety of medicines without obtaining any benefit. He was a stout made man, about forty-eight years of age, but had a very fallow complexion, and a prominent belly, the region of the liver
being

being enlarged, and, on pressure, painful. These, together with the flux, he himself imputed to his having been poisoned by the negroes, though he had no idea when, or how. On enquiry I found, he had had an intermittent fever of long duration in the hot climates, and from that period his health had declined. His present complaint began on the coast, with costiveness, attended with loss of appetite, vomiting, violent pain of the belly, shivering, and fever. When, after five days, a stool was procured, he seemed somewhat relieved at first. A looseness however succeeded, with griping pain, tenesmus, slimy and bloody stools. From this time his appetite continued tolerably good.

The most probable, and usual, means of putting a stop to the Dyfentery were ordered, and persevered in near eight months, but finding that, during all that time, the disease was little relieved, and that only sometimes for a short space, recurring again with its usual violence very soon, I began to consider, that it might very probably take its rise from a diseased liver, and a consequent irregular secretion of bile. If that were the case, it was
not

not likely that the flux should be got the better of, unless the affection of the liver on which it depended was first removed. With this view, having admitted him an in-patient, January 16, 1777, I directed the mercurial inunctions to be gradually applied, and, as no increase of the Dysenteric symptoms followed their use, they were continued (a fortnight) 'till the mouth was affected, and a moderate salivation came on. When this took place, his stools became less frequent, more regular, natural, and free from blood. By the time it had ceased, he thought himself freed from all his complaints, and, at his own request, was discharged, February 27: though I told him then I was apprehensive that his disorder would return, and a repetition of the course be requisite.

A fortnight after, (March 13,) he applied again for admission: his appetite was impaired, his gripings violent, his stools very frequent and bloody; his belly, about the region of the liver, was swelled, hard, and painful. After premising a few gentle evacuants, the inunctions were repeated. For some days he was no better, and, being rather feverish, the mer-

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cury was omitted for a week, and then resumed. April 4, ptyalism was produced; he was then very easy in his belly, his looseness was almost stopped, and he said himself he was much better than ever he had been since the beginning of his illness. The mercurials, after a little respite, were continued some time longer, and on May 8, he was discharged perfectly well, and so remained.

2. September 23, 1779, William Martin, an Irish mariner, 28 years old, meagre, of a fallow, bilious, complexion, was admitted an in-patient of the Infirmary, for a Dysentery of six years standing. He had spent much of his life in the warm climates: seven years ago he had lain nine months upon the Coast of Guinea, and a little before that, had remained there two years at one time, during which residence he had had the flux. It began again in December, 1773, at Boston, and had continued from that time, almost without intermission, in spite of every attempt to cure it. For that end, he had been in an Hospital in Charles-Town, South-Carolina; and on his return to England, was six months in Guy's, and after that, three months in St. Bartholomew's Hospital,

pital, London ; from thence he went into that at Cork, and afterwards into those of Gibraltar and Minorca, where he was discharged from the navy as unfit for the service. In these he took decoctions of Logwood, Decoctum Album, Rhubarb, and a great number of other medicines, but found no benefit from any, except Lapis Calaminaris boiled in Milk, and from the dry vomit*, both of which checked the purging, though but for a short time, not more than twenty-four hours. He was forced to live almost wholly on Milk. His stools were attended with much griping pain ; they were bloody, but not always so. He was also troubled with the piles.

As such various means had been used under the direction of so many able practitioners, I thought it unnecessary to attempt to succeed in his cure by the usual remedies, and deter-

* The dry vomit (recommended by Dr. Maryatt) is composed of Tart. Emet. and Vitriol. Roman. aa. p. æq. Five grains is given as a dose upon an empty stomach, and without any liquid to assist the vomiting. It generally operates easily, and evacuates much bile, without relaxing the stomach. After its operation, a spoonful of brandy is given, and if that comes up, a second, to remove the inclination to vomit.

mined to try what mercurials would do. It is true he had no sensible enlargement of the belly, but I was induced to have recourse to the inunctions, from recollecting the great benefit I had experienced from them in the preceding case, from the long duration of the disease, and the inefficacy of every remedy which had been administered. His complexion too was very bilious, and had been so much so, long before I saw him, that he was supposed to have the jaundice; some had concluded that he was poisoned on the coast; others that he was in a consumption, as his flesh and strength declined much, though he had no cough, nor any pain in the breast.

I ordered him then to rub in half a dram of strong mercurial ointment, (equal parts,) every other evening, which he continued to do 'till October 9, when ptyalism was produced, which lasted ten or twelve days very copious. During this time he took only the Decoctum Album, and Castile Soap. In three days after the spitting began, his flux stopped, his stools were natural, not more than one or two in twenty-four hours, and without any griping. He had however a very acute head-ach, which

which gradually went off, and by the end of the month he could eat broths, and other things which before this time used to render the complaint violent, without any inconvenience.

Still the purging returned at times soon after, though not with the former violence, and he took the dry vomit, Rhubarb, and Lapis Calaminaris, to little purpose. At his own request, therefore, he began again with the inunctions, November 25, which excited salivation in less than a fortnight, and seemed to have carried off the complaint; but as the stomach and intestines were greatly debilitated, I gave him, at different times, the sal martis, bark, and some astringents. Towards the end of January, 1780, he had a rheumatic attack, which he ascribed to cold from changing his room, but which yielded soon to the Decoctum Guaici. The middle of February he was attacked with a slight tertian ague, to which he had been subject before, but which went off in a few days. In the beginning of March he was free from both, and signified a desire of going to sea.

The account he then gave of himself was this. Of stools, he had two or three in twenty-four hours, easy, and natural, sometimes more costive than he wished on account of his hæmorrhoids. Perhaps once in a fortnight, he had a purging which continued about twenty-four hours. His appetite was poor, but what he eat, (in which he was not very cautious,) sat easier upon his stomach, and agreed better with him, than it had used to do, and his health and strength were much better than at any time since his disorder began. I consented to his going a short voyage, and his intention is, if the looseness return, and further assistance be necessary, (which it probably may,) to apply again, and try the effect of another salivation.*

3. Gaspard-Peter Finch, a German, twenty-two years of age, having been a voyage to Jamaica, after staying there about half a year, came in a vessel to Liverpool, where he applied for admission into the Infirmary, October 14, 1779, for a Dysentery, which began during the passage, and had continued about

* I never saw more of this man, but have reason to believe he got well, having been seen long afterwards apparently in good health.

three months. He was much emaciated, had a fallow, bilious, complexion, but no apparent enlargement, or increased sensibility, of the Viscera. I gave him the usual evacuant, and astringent, medicines, which he continued to take for three months, with but very little advantage, and that not permanent. Finding this to be the case, I proposed to him to try a mercurial course, to which he was persuaded by the last-mentioned patient. He began to rub in half a dram of the strongest ointment every night, and continued so to do for a month, when it was discontinued on account of his having a tertian ague, of which he had had an attack before, since his admission into the Hospital. It yielded, as did the former, to an emetic before the cold fit, and an opiate in the beginning of the hot one. I suffered it, indeed, to go on for a few days, as thinking it might possibly be of some service. No salivation had taken place, but his stools were regular, without pain or blood, and not more than two in twenty-four hours. He left the Infirmary at the end of February, and I met him a fortnight after, when he informed me he was perfectly well, and going to Barbadoes in a vessel from this port.

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These are the only cases, of which, as they appeared new and important, I had noted the particulars, but I am assured by Mr. Richard Audley, a very intelligent young surgeon, who attended our Hospital five years with great diligence, that some others of the same nature, treated by me during that time in this method, have succeeded equally well. Though the accuracy of his observation is much to be depended upon, yet, not being able at this distance of time to recollect the circumstances, I omit taking further notice of them.

Indeed I have found in many instances, where after a residence in the hot climates, the liver has been obstructed and enlarged, that very great benefit has been obtained by the gradual, and prudent use of mercurials, and that, sometimes, from much smaller quantities than one might expect. A case of this kind occurred not long since. A gentleman who had spent some years in the West-Indies, returned to England, on account of his having long laboured under a bad state of health, which was not at all improved during the voyage home. He applied to me soon after his arrival, and, as it appeared clearly that the
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liver was affected, I put him upon the mercurial inunctions. After he had used them a few times, he had occasion to go a journey of three or four days, and was desired to omit the mercury, which he did about a week before he sat out. By the time he came to the end of his journey, however, he found himself much better, and was very soon surprisngly recovered.

We frequently meet with here, persons returned from the Coast of Africa, with pale, fallow, bilious, complexions, prominent bellies, loss of appetite and strength, swelled legs, and general ill health. They grow gradually worse, and die, at length, emaciated and dropfical. They suspect, and others conclude, without foundation, that they have had a slow poison given them privately by the negroes. But these evils, which are wrongfully attributed to the natives, are only caused by the climate. Enquire of these poor objects, you will generally find, they have had a fever, (an intermittent,) or the flux, in the Torrid Zone; examine them, and you will frequently perceive, that the Viscera are enlarged and indurated. This is the true cause of their bad

state of health, and the remedy for it, in the opinion of the ingenious Dr. Lind, Dr. Clark of Newcastle, and others, is to be looked for in mercurials. I have repeatedly seen great good effects in such cases from a salivation, and where that has relieved but in part, a second, or even a third, being excited, has succeeded well.

The practice now recommended, I apprehend, has been sufficiently experienced to justify a trial of it. Success in a number of cases can alone establish its propriety.

In the foregoing paper, I have made cursory mention of two remedies, I have often found of great use, and to the beneficial effects of which I wish to bear more ample testimony. And I conceive it would be rendering service, both to the faculty and to the community, if those of the profession, who have had frequent occasions of observing the good effects of any particular medicine, or mode of treatment, would embrace such opportunities as may offer to communicate and recommend it to the public,

lic; especially when such remedy, or practice, is not generally adopted, which I believe is the case with those of which I am now speaking.

The dry vomit, as I observed above, is a composition of equal parts of tart. emet. and vitr. roman. A quantity of it is mixed at once, and the dose of this mixture, commonly given, is five grains, on an empty stomach, in about half a meat-spoonful of water. The patient is directed to drink nothing after it. In a short time after swallowing it, sickness is produced, and a quantity of bile is generally thrown up. To take off the sickness, a spoonful of brandy, or of any spirit, may then be given, and if that should come up, a second.

This was a favourite medicine of the late Dr. Maryatt, whose practice, to judge from the account he himself gave of it, appears more empirical than rational. I own, I entertained very great doubts of the propriety of giving, in common, two grains and an half of emetic tartar and the same quantity of blue vitriol, as a vomit; having seen several instances of violent vomiting produced by a much smaller quantity of tartar emetic alone; particularly

in the present Earl of Arran, to whom, when at Naples, I gave a single grain (prepared at Apothecaries-hall, in London,) which operated to a degree extremely alarming and distressing. I did not chuse therefore to make a trial of the dry vomit, 'till I was assured by a gentleman of great ingenuity and veracity, who had given it to several, and even taken it himself, that its operation was far from severe. Since then I have given it in a variety of cases, and it has acted so mildly, that I scarcely recollect an instance where it was complained of as too violent; but I have met with several wherein five grains were not sufficient to produce any effect, and where I have found it necessary to increase the dose to seven or eight grains of the mixture. The reason why the compound acts more mildly than one of the ingredients would do alone,—whether some decomposition takes place on their being combined together,—is not easy to ascertain. But it is sufficient for medical purposes to know, that it is not only a safe, but even a mild vomit.

The nature of the disease, or the state of the stomach, may often render it more eligible to give a dry vomit. It is the stimulus to the whole

whole system from the action of vomiting which, in many cases, we would wish to excite. In this respect, and in evacuating bile, the dry vomit answers the same purpose as sea-sickness. Drinking largely of warm water after taking a vomit, as is commonly practised, besides lessening these effects, tends to leave the stomach in a relaxed state, and thus may frequently do as much harm, as it was expected to do good.

A practice of which I have great reason to speak well, and which I should wish also to recommend to the notice of others who may not have experienced it, is that of the ingenious Dr. Lind in the cure of intermittents:—the giving a vomit an hour before the cold fit, and a sufficient dose of tinct. thebaic. half an hour after the hot fit commences. In many intermittents of long continuance, both tertians and quartans, I have known this method succeed to put a stop to them the very first time it was made use of. But though this will often not be the case, and it will be necessary to repeat the tinct. thebaic. on each accession of the hot fit, and to increase the dose of it, yet the great relief it occasions, and the gradual diminution in the strength of the fits, are strong inducements

inducements to persevere in the use of the remedy, 'till they are compleatly removed. That this will be the consequence of such perseverance, even where no other medicine is exhibited, experience will evince. I very rarely indeed have had occasion to recur to the bark for the cure of agues, though I sometimes give it after the complaint is removed, with a view to strengthen the habit. Indeed, we receive into our Infirmary numbers of the poor Irish, returning home from the fens after harvest, labouring a long time under agues, having begged their way, half-starved, and greatly debilitated. In such, a cure is not to be looked for 'till they are a little recruited, by enjoying, for some time, the necessaries and conveniences of life, to which they have long been strangers. It is easy to observe the gradual good effects produced in them by better living only. To persons in this situation, I sometimes give, with advantage, a glass of spirits a little before the paroxysm. I remember, many years ago, seeing a German soon cure himself of an obstinate ague, by drinking every morning a glass of brandy, in which a small quantity of myrrh, aloes and saffron was infused, and it proved equally successful, in some cases of long standing,

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ing, where I recommended a trial of it after the bark has failed. To the spirit however, I conclude, the success is chiefly to be attributed. I have also given twenty drops of tinct. thebaic. before the cold fit, and the same quantity during the hot one, in some cases, with evident advantage.

There is one circumstance more, I should wish to mention now I am upon this subject. It is a case of accidental recovery, in one of these poor Irishmen, whom I had taken into the Infirmary, labouring under an ague of long continuance, anasarca, extreme debility and emaciation. His complexion was very fallow, and his belly prominent; the effect, as appeared on examination, of enlarged and indurated Viscera; a frequent consequence of agues amongst those who live in low, marshy, situations, to which they give the name of the ague-cake, and which, together with the subsequent ill health, is often wrongfully attributed to the use of the bark. I tried the above, and other means, for some time, without any permanent good effect. The ague indeed would stop for a while, and the patient seemed to acquire a little strength, but he soon relapsed. At
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length it happened that mercurial inunctions, directed for another patient, were, by mistake, given to him. He had used them only a few times, when, to my great surprize, I found him in a salivation. I was the less dissatisfied at the mistake, as I thought it probable he might thence receive essential benefit : and the event justified my opinion, for the man soon got quite well. An instance this, which might be adduced as a further proof of the good effects of mercurials in cases of obstructed Viscera ; though, such was the degree of weakness of this patient, that, however desirable a mercurial treatment might have appeared, few practitioners would have ventured to advise it for a man so extremely reduced : and though the event was favourable, it would scarcely be a sufficient justification for adopting so hazardous a practice, in similar circumstances.

T H E E N D.

